

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1. (Previously Presented) A planographic printing plate comprising: a recording layer writable by exposure to an infrared laser, said recording layer provided on a support and comprising an infrared absorbing agent and a polymer insoluble in water and soluble in alkaline water, the support including an aluminum substrate comprising a roughened surface including an inorganic oxidation coating disposed thereon, with the density of said inorganic oxidation coating being from 1000 to 3200 kilograms/m³.

Claim 2. (Currently Amended) A planographic printing plate comprising a recording layer writable by exposure to an infrared laser, said recording layer provided on a support, the support including an aluminum substrate comprising a roughened surface including an anodic oxidation coating disposed thereon, the anodic oxidation coating before said recording layer is provided thereon having at least one of:

- (i) density from 1.0 g/cm³ to 3.2 g/cm³ determined immediately after said anodic oxidation coating is disposed on the substrate, and
- (ii) a vacancy ratio from 20% to 70%, and micropores physically exposed on the surface of the anodic oxidation coating having diameters of not more than 15 nm,

wherein a contact angle of a non-image area of the anodic oxidation coating is not more than 20°,

and wherein the vacancy ratio in percent and the density of the anodic oxidation coating before said recording layer is provided are respectively as follows:

$$\text{vacancy ratio} = (1 - (\text{density of anodic oxide coating}/3.98)) \times 100$$

density of anodic oxidation coating (g/cm³) = weight of anodic oxidation coating per unit area/thickness of the anodic oxide coating, and wherein the recording layer comprises a thermal type photosensitive layer directly writable by exposure to an infrared laser, the thermal type photosensitive layer including infrared absorbing agent(s) and polymer(s) insoluble in water and soluble in alkaline water, with the solubility of an exposed portion of the thermal type photosensitive layer changing with respect to an alkali developer.

Claims 3. (Original) The planographic printing plate of claim 2, wherein the support further comprises a sealing treatment applied on the anodic oxidation coating.

Claim 4. (Original) The planographic printing plate of claim 2, wherein the anodic oxidation coating has a surface area weight of 0.5 g/m² to 20 g/m².

Claim 5. (Original) The planographic printing plate of claim 3, wherein the anodic oxidation coating has a surface area weight of 0.5 g/m² to 20 g/m².

Claims 6. - 9.(Cancelled)

Claim 10. (Currently Amended) The planographic printing plate of claim [[6]]
2, wherein the recording layer comprises a negative recording layer, the negative recording layer including an infrared absorbing agent, compounds that release an acid or radical by heat, and compounds that form crosslinks or polymerize due to the acid or radical.

Claim 11. (Currently Amended) The planographic printing plate of claim [[7]]
3, wherein the recording layer comprises a negative recording layer, the negative recording layer including an infrared absorbing agent, compounds that release an acid or radical by heat, and compounds that form crosslinks or polymerize due to the acid or radical.

Claim 12. (Currently Amended) The planographic printing plate of claim [[8]]
4, wherein the recording layer comprises a negative recording layer, the negative recording layer including an infrared absorbing agent, compounds that release an acid or radical by heat, and compounds that form crosslinks or polymerize due to the acid or radical.

Claim 13. (Currently Amended) The planographic printing plate of claim [[9]]
5, wherein the recording layer comprises a negative recording layer, the negative recording layer including an infrared absorbing agent, compounds that release an acid or radical by heat, and compounds that form crosslinks or polymerize due to the acid or radical.

Claim 14. (Currently Amended) The planographic printing plate of claim [[6]] 2, wherein the recording layer comprises a positive recording layer, the positive recording layer including an infrared absorbing agent and compounds that become soluble in an alkaline aqueous solution by bonds thereof decomposing by heat.

Claim 15. (Currently Amended) The planographic printing plate of claim [[7]] 3, wherein the recording layer comprises a positive recording layer, the positive recording layer including an infrared absorbing agent and compounds that become soluble in an alkaline aqueous solution by bonds thereof decomposing by heat.

Claim 16. (Currently Amended) The planographic printing plate of claim [[8]] 4, wherein the recording layer comprises a positive recording layer, the positive recording layer including an infrared absorbing agent and compounds that become soluble in an alkaline aqueous solution by bonds thereof decomposing by heat.

Claim 17. (Currently Amended) The planographic printing plate of claim [[9]] 5, wherein the recording layer comprises a positive recording layer, the positive recording layer including an infrared absorbing agent and compounds that become soluble in an alkaline aqueous solution by bonds thereof decomposing by heat.

18. (Currently Amended) The planographic printing plate of claim [[6]] 2, wherein the polymer(s) have at least one acidic group selected from the following:
(1) phenol group (-Ar-OH);

- (2) sulfonamide group (-SO₂NH-R);
- (3) substituted sulfonamides group (-SO₂NHCOR, -SO₂NHSO₂R, -CONHSO₂R);
- (4) carboxylic group (-CO₂H);
- (5) sulfonic group (-SO₃H); and
- (6) phosphoric group (-OPO₃H₂);

wherein Ar represents di-functional aryl connecting group that may have a substituent, and R represents a hydrocarbon group that may have a substituent.

19. (Currently Amended) The planographic printing plate of claim [[7]] 3, wherein the polymer(s) have at least one acidic group selected from the following:

- (1) phenol group (-Ar-OH);
- (2) sulfonamide group (-SO₂NH-R);
- (3) substituted sulfonamides group (-SO₂NHCOR, -SO₂NHSO₂R, -CONHSO₂R);
- (4) carboxylic group (-CO₂H);
- (5) sulfonic group (-SO₃H); and
- (6) phosphoric group (-OPO₃H₂);

wherein Ar represents di-functional aryl connecting group that may have a substituent, and R represents a hydrocarbon group that may have a substituent.

20. (Currently Amended) The planographic printing plate of claim [[8]] 4, wherein the polymer(s) have at least one acidic group selected from the following:

- (1) phenol group (-Ar-OH);
- (2) sulfonamide group (-SO₂NH-R);
- (3) substituted sulfonamides group (-SO₂NHCOR, -SO₂NHSO₂R, -CONHSO₂R);

- (4) carboxylic group (-CO₂H);
- (5) sulfonic group (-SO₃H); and
- (6) phosphoric group (-OPO₃H₂);

wherein Ar represents di-functional aryl connecting group that may have a substituent, and R represents a hydrocarbon group that may have a substituent.

21. (Currently Amended) The planographic printing plate of claim [[9]] 5, wherein the polymer(s) have at least one acidic group selected from the following:

- (1) phenol group (-Ar-OH);
- (2) sulfonamide group (-SO₂NH-R);
- (3) substituted sulfonamides group (-SO₂NHCOR, -SO₂NHSO₂R, -CONHSO₂R);
- (4) carboxylic group (-CO₂H);
- (5) sulfonic group (-SO₃H); and
- (6) phosphoric group (-OPO₃H₂);

wherein Ar represents di-functional aryl connecting group that may have a substituent, and R represents a hydrocarbon group that may have a substituent.